



**California Environmental Protection Agency
Department of Toxic Substances Control**

HAZARDOUS WASTE POST CLOSURE FACILITY PERMIT

Facility Name:

Occidental of Elk Hills, Inc.
27R Hazardous Waste Trench Unit
Southeast Section 27, Township 27 South
Range 23 East (MDB&M)

Owner Name:

Occidental of Elk Hills, Inc.
28590 Highway 119
Tupman, California 93276-1001

Operator Name:

Occidental of Elk Hills, Inc.
28590 Highway 119
Tupman, California 93276-1001

Facility EPA ID Number:
CA 4170024414

Effective Date:
July 15, 2008
Expiration Date:
July 14, 2018

Pursuant to California Health and Safety Code section 25200, this Resource Conservation and Recovery Act (RCRA)-equivalent Hazardous Waste Facility Permit is hereby issued to: Occidental of Elk Hills, Incorporated.

The Issuance of this Permit is subject to the terms and conditions set forth in the Approved Application dated February 2008. The Permit consists of 16 pages.

//Original signed by//

✓ Raymond Leclerc, P.E., Team Leader
Permit Renewal Team Leader
Department of Toxic Substances Control

Date: July 15, 2008

**Occidental of Elk Hills, Inc.
27R Hazardous Waste Trench Unit
Kern County
EPA ID NO. CA 4170024414**

HAZARDOUS WASTE POST CLOSURE FACILITY PERMIT

TABLE OF CONTENTS

PART I. DEFINITIONS.....	2
PART II. DESCRIPTION OF THE FACILITY AND OWNERSHIP.....	3
1. OWNER OF FACILITY.....	3
2. OWNER OF REAL PROPERTY.....	3
3. OPERATOR OF FACILITY.....	3
4. LOCATION.....	3
5. DESCRIPTION OF FACILITY OPERATIONS.....	3
6. FACILITY HISTORY.....	4
7. FACILITY SIZE AND TYPE FOR FEE PURPOSES.....	5
PART III. GENERAL CONDITIONS.....	6
1. PERMIT APPLICATION DOCUMENTS.....	6
2. EFFECT OF PERMIT.....	6
3. COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA).....	7
4. ENVIRONMENTAL MONITORING.....	7
5. ANNUAL HAZARDOUS WASTE REDUCTION AND MINIMIZATION CERTIFICATION.....	8
6. ACCESS.....	8
PART IV. PERMITTED UNITS AND ACTIVITIES.....	9
PART V. SPECIAL CONDITIONS.....	12
PART VI. CORRECTIVE ACTION.....	14
Attachment A 27R Hazardous Waste Trench Unit Location Map.....	16

PART I. DEFINITIONS

All terms used in this Permit shall have the same meaning as those terms have in the California Health and Safety Code, division 20, chapter 6.5 and California Code of Regulations, title 22, division 4.5, unless expressly provided otherwise by this Permit.

1. **"DTSC"** as used in this Permit means the California Department of Toxic Substances Control.
2. **"Facility"** as used in this Permit means all contiguous land and structures, other appurtenances, and improvements on the land used for the treatment, transfer, storage resource recovery, disposal or recycling of hazardous waste. A hazardous waste facility may consist of one or more treatment, transfer, storage, resource recovery, disposal or recycling operational units or combinations of these units.

For the purpose of implementing corrective action under California Code of Regulations, title 22, division 4.5, a hazardous waste facility includes all contiguous property under the control of the owner or operator required to implement corrective action.

3. **"Permittee"** as used in this Permit means the Owner and Operator.
4. **"RCRA"** as used in this Permit means the Resource Conservation and Recovery Act (42 U.S.C. §6901 et seq.).

PART II. DESCRIPTION OF THE FACILITY AND OWNERSHIP

1. Owner of Facility

The facility owner is Occidental of Elk Hills, Incorporated (hereafter "Owner")

2. Owner of Real Property

The owner of real property is Occidental of Elk Hills, Incorporated located at 28590 Highway 119, Tupman, California 93276-1001

3. Operator of Facility

The facility operator is Occidental of Elk Hills, Incorporated (hereafter "Operator" located at 28590 Highway 119, Tupman, California 93276-1001).

4. Location

The Occidental of Elk Hills, Inc. - 27R Hazardous Waste Trench Unit or Waste Management Unit (27R WMU) is located about one mile west of Elk Hills Road, just north of Skyline Road in the southeast $\frac{1}{4}$ of section 27, township 30 south, range 23 east, in the Mount Diablo Base and Meridian, Kern County, California (Attachments 1 and 2).

5. Description of Facility Operations

The Owner oversees oil production in a portion of the Elk Hills Oil Field, also known as the Naval Petroleum Reserve No. 1 (NPR-1) which occupies approximately 47,985 acres or 75 square miles. The U.S. Department of Energy (DOE) sold a portion of the property to the Owner on February 5, 1998. Petroleum has been produced in this area of Elk Hills since 1919. Within this area exists the 27R WMU, a closed and capped surface impoundment that covers an area of about 4.5 acres, and is the subject of this permit renewal. The 27R WMU is part of the 27R Waste Disposal Facility, the remainder of which surrounds the facility and is located in section 27.

Surface Impoundments

The 27R WMU consisted of a series of five adjacent surface impoundments or trenches that covered an area of 4.5 acres. Neutralized acids and tank bottom sludge were placed in these impoundments from 1980 through 1985.

Land Use Covenant

A Land Use Covenant between DTSC and the Owner does not exist. California Code of Regulations, title 22, section 66264.119(b), identifies that the owner or operator is required to record a notation on the deed to the property, or on some other instrument which is normally examined during a title search, that will notify any potential purchaser of the property that the land was used to manage hazardous waste and that its use is restricted. Since NPR-1 was designated as Federal Land under Executive Order of the President on September 2, 1912, no deed or other instrument that would be examined during a title search exists for the property. As a result, Bechtel Corporation (Bechtel; Facility operator for DOE prior to the Owner) notified Kern County Planning and Development Services in an October 21, 1993 letter that Hazardous Waste is present at the 27R WMU and that the subject land use is restricted. The letter also included a survey plat and record of type/quantity of hazardous wastes disposed.

6. Facility History

Operations at the 27R Waste Disposal Facility began under Regional Water Quality Control Board, Waste Discharge Requirements (WDR) order No. 73-141 in 1975. The Facility was used to dispose of oil field wastes, primarily drilling muds and fluids. In 1980, in response to Resource Conservation and Recovery Act (RCRA) regulations, the Facility owner applied to the U.S. Environmental Protection Agency Region 9 (U.S. EPA) for a hazardous waste permit to dispose of tank bottoms and acids in the 4.5 acre cell at the Facility. EPA returned the application on the basis of the exemption clause in 40 CFR 261.4 which excluded certain wastes from oil exploration and production operations under federal regulations. State regulations, however, do not exempt exploration and production operations. The State issued an Interim Status Document (ISD) to 27R WMU in 1981. The Facility operated under this ISD until operations were suspended by the Operator. A Closure Plan for the 27R WMU was submitted in 1986. This plan required the performance of a site characterization study which was completed in 1987. DTSC approved the closure plan in May 1991. A construction certification report was submitted to DTSC for review and approval in May 1992. DTSC provided a Completeness Determination for the 27R WMU on June 24, 1994. A Post-closure permit was issued on December 31, 1997 which is being renewed as part of this permit.

Based on a core hole investigation and the determination that groundwater beneath the site was greater than 1000 feet, DTSC granted the 27R WMU a waiver from the groundwater monitoring provisions of California Code of Regulations title 22, division 4.5, articles 6 and 22 on May 7, 1991.

A cap and vadose monitoring system for the 27R WMU was initiated on October 24, 1991 and completed on March 23, 1992.

7. Facility Size and Type for Fee Purposes

The Facility is categorized as a large Post Closure Facility pursuant to Health and Safety Code section 25205.7(d)(5). For the purpose of Health and Safety Code section 25205.4, the Post Closure period for the Facility shall be deemed to have commenced on June 24, 1994, which is when DTSC provided a Completeness Determination of the closure certification for the 27R WMU.

PART III. GENERAL CONDITIONS

1. PERMIT APPLICATION DOCUMENTS

The DTSC-approved Post Closure Permit Application dated February 2008 (Approved Application), is hereby made a part of this Permit by reference. The Approved Application includes the following document by reference: Post-Closure Permit Application for the 27R Hazardous Waste Trench Unit – Part B, February 2008.

2. EFFECT OF PERMIT

- (a) The Permittee shall comply with the terms and conditions of this Permit and the provisions of the Health and Safety Code and California Code of Regulations (Cal. Code Regs.), title 22, division 4.5. The issuance of this Permit by DTSC does not release the Permittee from any liability or duty imposed by federal or state statutes or regulations or local ordinances, except the obligation to obtain this Permit. The Permittee shall obtain the permits required by other governmental agencies, including but not limited to, those required by the applicable land use planning, zoning, hazardous waste, air quality, water quality, and solid waste management laws for the construction and/or operation of the Facility.
- (b) The Permittee is permitted to operate, monitor and maintain this Facility for post closure activities in accordance with the terms and conditions of this Permit and the Approved Application. Any management of hazardous wastes not specifically authorized in this Permit is strictly prohibited.
- (c) Compliance with the terms and conditions of this Permit does not constitute a defense to any action brought under any other law governing protection of public health or the environment, including, but not limited to, one brought for any imminent and substantial endangerment to human health or the environment.
- (d) DTSC's issuance of this Permit does not prevent DTSC from adopting or amending regulations that impose additional or more stringent requirements than those in existence at the time this Permit is issued and does not prevent the enforcement of these requirements against the Permittee.
- (e) Failure to comply with any term or condition set forth in the Permit in the time or manner specified herein will subject the Permittee to possible

enforcement action including but not limited to penalties pursuant to Health and Safety Code section 25187.

- (f) Failure to submit any information required in connection with the Permit, or falsification and/or misrepresentation of any submitted information, is grounds for revocation of this Permit (Cal. Code Regs., title 22, §66270.43).
- (g) In case of conflicts between the Approved Application and the Permit, the Permit conditions take precedence.
- (h) This Permit includes and incorporates by reference any conditions of waste discharge requirements issued to the Facility by the State Water Resources Control Board or any of the California Regional Water Quality Control Boards and any conditions imposed pursuant to section 13227 of the Water Code.

3. COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

A Notice of Exemption has been prepared in accordance with the requirements of Public Resources Code section 21000 et seq. and the CEQA Guidelines, section 15070 et seq. of California Code of Regulations, title 14.

4. ENVIRONMENTAL MONITORING

- a) For the purpose of California Code of Regulations, title 22, sections 66264.91(b), 66264.92, 66264.93, 66264.94, and 66264.95, the Facility is exempt from Groundwater Monitoring as DTSC granted the 27R WMU a waiver from the groundwater monitoring provisions on May 7, 1991.
- b) For the purpose of California Code of Regulations, title 22, section 66264.96 the Compliance Period for the regulated unit at the Facility is 30 years. DTSC may extend the Post Closure monitoring period beyond the 30-year minimum to protect human health and the environment. Under California Code of Regulations, title 23, section 2580(a), the Post Closure care monitoring period for Class I facilities "shall be extended for as long as wastes pose a threat to water quality."
- c) For the purpose of California Code of Regulations, title 22, section 66270.31, the monitoring, recording, and reporting program for the Facility is described in Section 8.0 of the Approved Application.

The Permittee shall comply with the applicable environmental monitoring and response program requirements of California Code of Regulations, title 22, division 4.5, chapter 14, article 6 and 17.

5. ANNUAL HAZARDOUS WASTE REDUCTION AND MINIMIZATION CERTIFICATION

The Permittee shall certify annually that it has a hazardous waste reduction and minimization program and method in place and shall keep the annual certification as part of its Operating Record in accordance with Health and Safety Code section 25202.9 and California Code of Regulations, title 22, section 66264.73(b)(9).

6. ACCESS

- (a) DTSC, its contractors, employees, agents, and/or any United State Environmental Protection Agency representatives are authorized to enter and freely move about the Facility for the purposes of interviewing Facility personnel and contractors; inspecting records, operating logs, and contracts relating to the Facility; reviewing progress of the Permittee in carrying out the terms of Part VI of the Permit; conducting such testing, sampling, or monitoring as DTSC deems necessary; using a camera, sound recording, or other documentary-type equipment; verifying the reports and data submitted to DTSC by the Permittee; or confirming any other aspect of compliance with this Permit, Health and Safety Code, division 20, chapter 6.5, and California Code of Regulations, title 22, division 4.5. The Permittee shall provide DTSC and its representatives access at all reasonable times to the Facility and any other property to which access is required for implementation of any provision of this Permit, Health and Safety Code, division 20, chapter 6.5, and California Code of Regulations, title 22, division 4.5, and shall allow such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to the entire Permit or undertake any other activity necessary to determine compliance with applicable requirements.
- (b) Nothing in this Permit shall limit or otherwise affect DTSC's right to access and entry pursuant to any applicable State or federal laws and regulations.

PART IV. PERMITTED UNITS AND ACTIVITIES

This Permit authorizes the operation, monitoring and maintenance only of the Facility units and activities listed below. The Permittee shall not treat, store or otherwise manage hazardous waste in any unit other than those specified in this Part IV. Any modifications to a unit or activity authorized by this Permit require the written approval of DTSC in accordance with the permit modification procedures set forth in California Code of Regulations, title 22, division 4.5.

For the purpose of California Code of Regulations, title 22, section 66270.1(c) and other similar, unit-specific regulatory requirements, this Facility has one Hazardous Waste Management Unit. The unit is described in detail in the Approved Application as follows:

UNIT NAME:

The unit name is the 27R Hazardous Waste Trench Unit or 27R WMU.

LOCATION:

The 27R WMU is located about one mile west of Elk Hills Road in the southeast ¼ of section 27, township 30 south, range 23 east, in the Mount Diablo Base and Meridian, Kern County, California (Attachment C).

ACTIVITY TYPE:

The 27R WMU consisted of five adjacent surface impoundments or trenches that covered an area of 4.5 acres as shown in Attachment C. The former trenches received neutralized acids and tank bottom sediments and sludge between 1975 until November 1985. The volume of wastes disposed of into the trench units prior to January 1978 is not available, however the yearly total of the waste streams disposed of between 1978 and 1985 are listed in Table 1.

Hazardous Waste Volumes at the 27R WMU
Table 1

Year	Tank Bottom Sediment/Sludge (Total Barrels)	Neutralized Acid Mixtures (Total Barrels)
1975-1977	Unknown Volume	Unknown Volume
1978	8,869	4,030
1979	3,824	16,310
1980	340	1,490
1981	855	0
1982	7,395	130
1983	0	130
1984	13,735	0
1985	0	0
Totals	35,018	22,090

Note: one barrel is equal to 42 gallons.

ACTIVITY DESCRIPTION:

The 27R WMU was designed to receive neutralized acids and tank bottom sediments and sludge associated with oil and gas production and storage activities.

PHYSICAL DESCRIPTION:

The 27R WMU cover consists of the following: a base fill overlain by 10 feet of clean fill (medium to fine silts and sands), overlain by a 24 inches of clay (surface moisture cap), overlain with 18 to 24 inches of clean soil layer (vegetation layer). Each of the layers were placed on the site so that a crown was established with a 3 to 5 percent slope from the center of the fill to the outer portion of the landfill. A 10 to 15 percent slope was created around the perimeter of the landfill cover (approximately 50 to 100 feet from the edge of the fill to the existing grade of the surrounding area outside of the 27R WMU. The landfill cover was completed in March 1993 by Golder and Associates of Alameda, California. Details regarding the construction of the closure cover are included in the Golder report "Quality Assurance Observation and Testing for Closure Cover Construction, 27R Hazardous Waste Trench Unit, Naval Petroleum Reserve No. 1 (NPR-1)", dated May 6, 1992.

MAXIMUM CAPACITY

Historical waste volumes are presented in Table 1. For this permit, the Facility is closed and does not receive additional waste.

WASTE TYPES:

None. Unit is closed.

RCRA HAZARDOUS WASTE CODES:

None. Unit is closed.

CALIFORNIA HAZARDOUS WASTE CODES:

None. Unit is closed.

SURFACE WATER MONITORING AND AIR EMISSION STANDARDS Surface water and air monitoring were deemed to be unnecessary due to the overall lack of significant surface water at the Facility. This is due to the engineered cap over the source area, reducing a pathway for impact to surface water and low annual rainfall. For these reasons, there are no provisions for surface water monitoring in this Permit.

Vadose zone monitoring will be performed daily with soil moisture measurements collected every four hours. The daily measurements (6 measurements over a 24 hour period) will be calculated by the on site datalogger to record a daily average soil moisture measurement. Both of these measurements (4-hour and daily average) will be recorded at the on site datalogger and downloaded at the time of the site inspection. This data will be included with the annual post-closure monitoring report for the 27R WMU.

PART V. SPECIAL CONDITIONS

1. NO HAZARDOUS WASTE MAY BE DISPOSED OF ON-SITE

No hazardous wastes may be disposed of on-site.

2. LAND USE COVENANT

Pursuant to Civil Code section 1471(c), DTSC has determined that a covenant of land use is reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on land of hazardous materials as defined in Health and Safety Code section 25260. The Permittee and DTSC shall sign and record a covenant to restrict use of property within six months of authorization of this permit.

3. VADOSE ZONE MONITORING

Occidental is evaluating whether to terminate the 27R WMU vadose zone monitoring system or continue to monitor as outlined in section 8.2.3 of the Approved Application. A proposal to terminate the existing vadose zone monitoring system was included as part of a draft Post-Closure Permit Application for the 27R WMU dated June 2007. The proposal to terminate the vadose zone monitoring system was reviewed by DTSC's Geological Services Unit (GSU). DTSC rejected discontinuation of vadose monitoring due to insufficient justification and conflicts with California Code of Regulations, title 22, article 6 (Memorandum to Mr. Peter Bailey of the DTSC Permit Renewal Team, dated December 17, 2007, included in the Notice of Deficiency letter dated December 20, 2008). DTSC suggested that discontinuation of vadose monitoring is possible if it can be demonstrated that in the absence of groundwater and vadose zone monitoring networks, surface inspections and civil surveys as well as other lines of existing evidence assure the future performance of the cap and does not impact human health and the environment.

Based on comments and recommendations provided by GSU, the Owner may decide to evaluate and provide the information requested by the GSU for further evaluation to terminate vadose zone monitoring at the 27R WMU. In the event the Owner elects to pursue termination of vadose zone monitoring, the Owner will submit a *Proposal to Terminate Vadose Zone Monitoring at the 27R Hazardous Waste Trench Unit* (Vadose Zone Document) to DTSC for review within 2 years of the signature date of the this Post-Closure Permit. The Vadose Zone Document will include but not be limited to the following: a summary of the subsurface site characterization data; annual rainfall and engineered cap

evaluation; a comprehensive analysis of vadose zone monitoring data; and all pertinent aquifer exemption data and other regulatory exemptions for the groundwater aquifer beneath the 27R WMU. In the event DTSC approves the Vadose Zone Document, the Owner can cease Vadose Monitoring activities.

In the event the Owner elects not submit the Vadose Zone Document or DTSC does not approve Vadose Zone Document, then the Owner will continue vadose zone monitoring at the 27R WMU as detailed in sections 8.2.3 and 14.3 of the Approved Application.

PART VI. CORRECTIVE ACTION

CORRECTIVE ACTION BACKGROUND

Corrective Action activities are ongoing outside of the 27R WMU and within the NPR-1 area. Corrective Action is being conducted under an Agreement for Site Assessment (ASA) between DTSC and DOE, originally signed on December 2, 1997 with two amendments in 1999 and one amendment in 2001. A fourth amendment is being drafted as this permit is being prepared. Approximately 131 Solid Waste Management Units (SWMUs) have been identified during previous Corrective Action assessments. The DOE contracted the Army Corp of Engineers (ACE) to continue Corrective Action or RCRA Facility Investigation activities. Some of these activities will include a review of historical information, soil sampling, and data gathering.

CORRECTIVE ACTION MONITORING

The 27R WMU received a waiver for groundwater monitoring. The remaining portion of the NPR-1, however, continues to be subject to RCRA Facility Investigation and future groundwater corrective action monitoring if necessary. These activities remain under the authority of DTSC

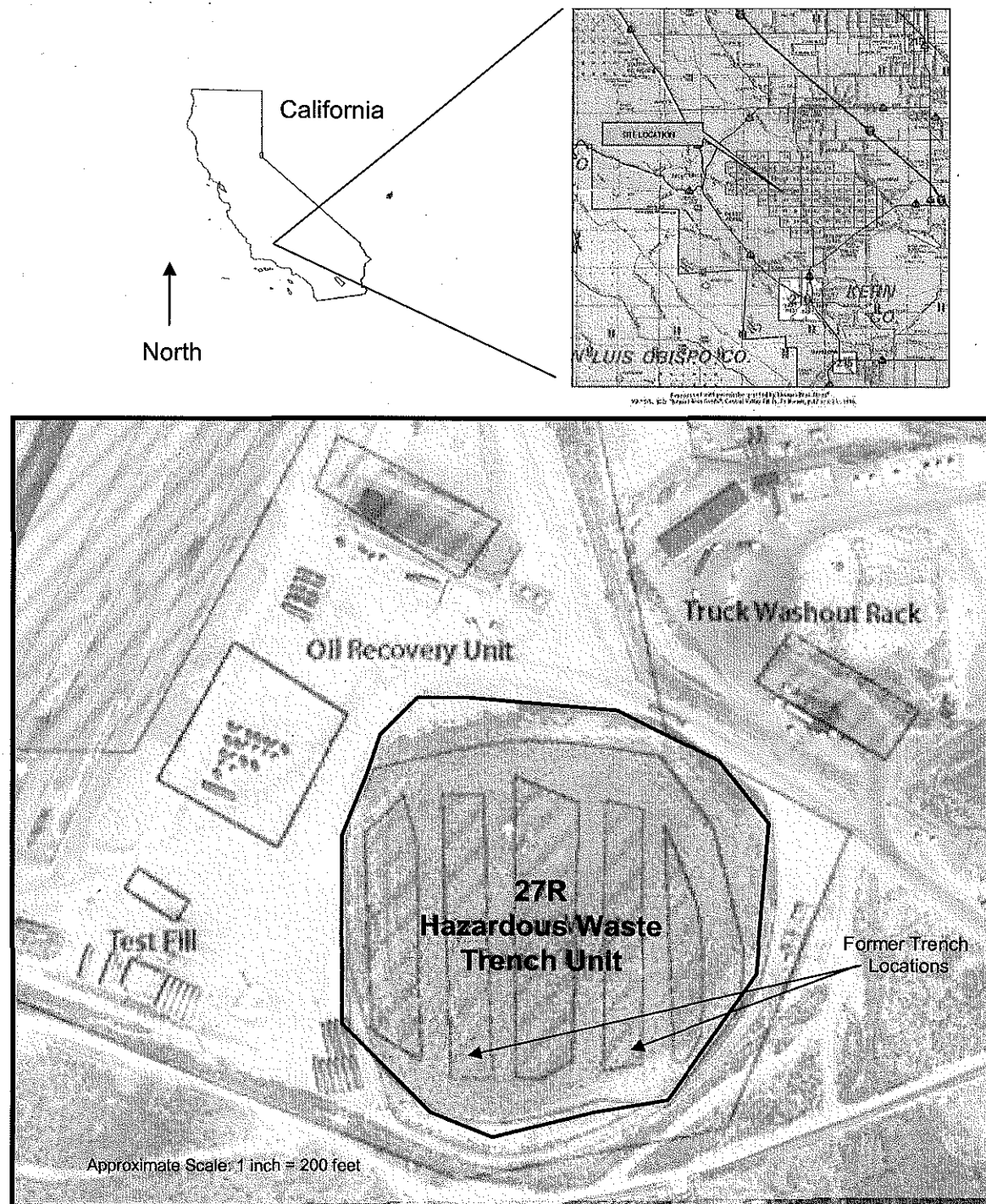
POTENTIAL CORRECTIVE ACTION

1. In the event the Permittee identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous constituents, or discovers new Solid Waste Management Units (SWMUs) not previously identified, the Permittee shall notify DTSC orally within 24 hours of discovery and notify DTSC in writing within 10 days of such discovery summarizing the findings including the immediacy and magnitude of any potential threat to human health and/or the environment.
2. DTSC may require the Permittee to investigate, mitigate and/or take other applicable action to address any immediate or potential threats to human health and/or the environment and newly identified SWMUs or releases of hazardous waste and/or hazardous constituents. If and when corrective action is required at the Facility, the Permittee shall conduct corrective action under either a Corrective Action Consent Agreement or an Enforcement Order for Corrective Action issued by DTSC pursuant to Health and Safety Code sections 25187 and 25200.10.
3. To the extent that work being performed pursuant to Part VI of the Permit must be done on property not owned or controlled by the Permittee, the Permittee shall use its best efforts to obtain access agreements necessary to complete work required by this Part of the Permit from the present owner(s) of such

property within 30 days of approval of any workplan for which access is required.

"Best efforts" as used in this paragraph shall include, at a minimum, a certified letter from the Permittee to the present owner(s) of such property requesting access agreement(s) to allow the Permittee and DTSC and its authorized representatives access to such property and the payment of reasonable sums of money in consideration of granting access. The Permittee shall provide DTSC with a copy of any access agreement(s). In the event that agreements for the access are not obtained within 30 days of approval of any workplan for which access is required, or of the date that the need for access becomes known to the Permittee, the Permittee shall notify DTSC in writing within 14 days thereafter regarding both efforts undertaken to obtain access and its failure to obtain such agreements. In the event DTSC obtains access, the Permittee shall undertake approved work on such property. If there is any conflict between this Permit condition on access and the access requirements in any agreement entered into between DTSC and the Permittee, this Permit condition on access shall govern.

4. Nothing in Part VI of the Permit shall be construed to limit or otherwise affect the Permittee's liability and obligation to perform corrective action including corrective action beyond the Facility boundary, notwithstanding the lack of access. DTSC may determine that additional on-site measures must be taken to address releases beyond the Facility boundary if access to off-site areas cannot be obtained.



Attachment A
27R Hazardous Waste Trench Unit Location Map
Occidental of Elk Hills, Inc.
Post Closure Permit Renewal